AL2130 Waste Management 7.5 credits

Avfallshantering

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for AL2130 valid from Spring 2021

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Environmental Engineering, Mechanical Engineering

Specific prerequisites

Bachelor degree or 180 ECTS from a technical education

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

This course aims to give a deeper knowledge in the problems and possibilities of waste management from a national and global perspective. The course focuses on municipal solid waste issues and takes a holistic view on waste management solutions, as well as technical aspects

Aim and Objectives

After this course the student should be able to:

- Suggest and describe suitable technical solutions for biological and thermal treatment, and discuss the drawbacks and prerequisites for a chosen solution
- From a given case, connected to a solid waste problem, suggest, motivate and describe a way to tackle the problem from a system analysis approach
- Analyse and describe the potential of solid waste as a secondary raw material, and thereby associated problems and possibilities in a sustainable society
- Use and discuss around a system analytical tool connected to waste management
- Independently search for information connected to solid waste management, make a compilation of this, and analyse it in a written report
- Make an oral presentation of a group work and actively participate in the discussion of other groups work

Course contents

Description of waste; different types of waste, classification of waste, waste flows in society, amounts and composition of waste.

Causes of the waste problem and strategies to minimise these problems; Consumption and waste, waste hierarchy (waste prevention, recirculation etc), product development, problem solving with a system analysis approach.

Legal and economical means of control for waste management (Sweden and EU).

Waste treatment and handling, thermal and biological methods, landfill, handling of hazardous waste.

Examination

- INL1 - Assignment, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO1 - Project Work, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- ANN1 - Study Visit, 1.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.